

person, comprising: a 'rest member' (31, 63) for elevating a body part or lower limb to a level permitting transfer of the seated person to a surface with the body part or lower limb in a reclined position; an 'expandable member' (39, 61) associated with the rest member, and 'means for expanding' (41, 97) the expandable member upwardly and forwardly to an inclined elevation with the body part or lower limb on the rest member."

Contrary to the Examiner, Garman '149 does not show "means" (41, 97) for expanding the expandable member (39,61) upwardly and forwardly to an inclined elevation with the body part or lower limb on the rest member.

The lift 39 (Fig. 2) is a vertically expandable bellows. It is not expanded upwardly and forwardly to an inclined elevation because expansion to an inclined elevation would make the arrangement in Garman unstable, since there is nothing suggested in the reference for stabilizing the expanded bellows against inadvertent collapse if the bellows in an expanded position were to adopt an inclined orientation of the kind provided by the invention.

Likewise, the cushion 61 (Fig. 9) is in an apparatus 60, which is a pneumatically powered leg-lift and support attached to the front of the seat in Fig. 9. The cushion 61 occupies a vertical position when deflated and a horizontal position when inflated, as shown by the associated arrow in Fig. 9 (column 7, lines 6 through 8). The cushion 61 is not expanded to an inclined elevation; it is either vertical or horizontal.

The apparatus 63 is an auxiliary lifting device shown in Figs. 12 to 14 comprising three superimposed inflatable bags 64, 65 and 66, which like the lifting device 39 are not inflatable to an inclined position as taught by the invention.

The 'apparatus' designated 30 and 30A is a wheelchair, while the 'apparatus' designated 60 and 63 refers to an inflatable leg-lifting device attached to the front of the seat in Fig. 9. This is by contrast with the rigid support of applicant's leg-lifting device which is elevated upwardly and forwardly to an inclined position without any change in the level surface provided by applicant's leg-lifting device. Thus, if a leg is placed against the leg-lifting device in Garman, it is pivoted upwardly as the device is inflated. This is the opposite of the invention, where the leg-lifting device maintains any supported leg in a horizontal position as the leg is being elevated.

Amended Claim1

Claim 1 as amended is reproduced below, followed by a discussion of the distinctions provided by this claim over reference Garman.

Cl. 1 (Second amended) Apparatus for supporting a body part, comprising: a rest member for said body part; an expandable member associated with said rest member; and means for expanding said expandable member upwardly and

forwardly at an angle with respect to a base of said expandable member, with said body part on said rest member.

Claim 1 does not recite apparatus for assisting a seated person into adopting a reclined position from a sitting position. Claim 1 is limited to apparatus for supporting a body part, comprising a rest member for the body part; an expandable member associated with the rest member; and means for expanding the expandable member upwardly and forwardly at an angle with respect to the base of the expandable member, with the body part on the rest member. If the cushion panel 61 of Garman is associated with applicant's expandable member, it does not satisfy the limitation of being expandable upwardly and forwardly to an inclined position. Instead, as noted above, the apparatus 61 moves from a vertical to a horizontal position.

If the three superimposed bags of the bellows 63 is associated with applicant's expandable member, it also does not meet the limitation of being expandable upwardly and forwardly since it is made up of three superimposed inflatable bags.

The Examiner considers a 'rest member' (31, 63) as being for elevating a body part or lower limb to a level permitting transfer of the seated person to a surface with the body part or lower limb in a reclined position. However, the member 31 is a seat of a wheelchair and does not rest on the member 63 which is a lifting device formed by three superimposed inflatable bags that do not provide any forward motion during inflation, or adopt an inclined position as required by claim 1.

The Examiner considers an 'expandable member' (39, 61) as being associated with the rest member, but member 39 is an internally mechanically stabilized bellows located on a wheel chassis and the member 61 is a cushion panel that hangs in front of the wheelchair.

The Examiner also considers that 'means for expanding (41, 97)' expand the expandable member "upwardly and forwardly to an inclined elevation" with the body part or lower limb on the rest member. The member 41 inflates the device 60 by a hose connection but the device 60 is not expanded upwardly and forwardly and it does not adopt an inclined elevation since it is a support surface that is moved from a vertical to a horizontal position. The member 97 is merely the hose connection by which the movement takes place.

Amended Claim 21

Claim 21 as amended is reproduced below, followed by a discussion of the distinctions provided by this claim over reference Garman.

21. (Second amended) A system for assisting a person [having] to have a lower limb [into adopting] adopt a reclined position from a sitting position, comprising a surface upon which a person is to be seated; and [to recline; and means for

transferring the person to said surface, comprising] means for elevating [a] said lower limb of said person to a level permitting the transfer of said [person to said surface with said] lower limb [in] to a reclined position on said surface.

Claim 21, as amended, recites a system for assisting a person to have a lower limb adopt a reclined position from a sitting position, comprising a surface upon which a person is to be seated; and means for elevating said lower limb of said person to a level permitting the transfer of said lower limb to a reclined position on said surface.

Garman does not provide for the transfer, by a person seated on a surface such as a bed, of a lower limb by a mechanism adjoining the surface.

Amended Claims 11 and 31

Cl. 11 (Second amended) The method of supporting a body part for transfer, comprising the steps of: positioning said body part on a [rest] rigid member at rest; expanding said rest member to an inclined elevation with said body part supported thereon; and transferring said body part from said rest member.

Cl. 31 (Amended) A method for assisting persons seated [into adopting a reclined position] on an elevated surface comprising the steps of:
(a) positioning a seated person's lower limb on means for elevating said lower limb;
(b) elevating said lower limb with said person remaining seated; and
(c) transferring said elevated lower limb to said elevated surface.

The final Office Action does not apply Garman '149 to claims 11 and 31. Instead, these claims are rejected on Garman '086 (Garman, U.S. Patent 5,669,086) as disclosing the method step of "transferring the elevated body part or lower limb from the rest member" to the elevated surface upon which a person is to recline (see Figures 1, 2, 5-9, & 9A; column 5, lines 42-50; and column 7, lines 5-19).

However, in response to applicant's arguments on pages 3 and 4 of the prior amendment concerning the Carpenter et al. '736 and Garman '086 references, the Examiner has stated in the final Action that he "respectfully agrees and the prior art rejections pertaining thereto have been respectfully withdrawn."

Accordingly, it is believed that claims 11 and 31 are allowable.

As second amended, claim 11 is directed to the method of supporting a body part for transfer, comprising the steps of: positioning said body part on a rigid member at rest; expanding said rest member to an inclined elevation with said body part supported thereon; and transferring said body part from said rest member.

The inapplicability of Garman '086 to this claim has been acknowledged and Garman '149 does not suggest positioning a body part on a rigid member at rest.

As amended, claim 31 is directed to a method for assisting persons seated on an elevated surface comprising the steps of: (a) positioning a seated person's lower limb on means for elevating said lower limb; (b) elevating said lower limb with said person remaining seated; and (c) transferring said elevated lower limb to said elevated surface.

The inapplicability of Garman '086 to claim 31 has been acknowledged and Garman '149 does not suggest positioning a seated person's lower limb on means for elevating said lower limb; and elevating said lower limb with said person remaining seated.

The Rejection of Claims 2, 3, 4, 13, and 14; 5, 6, and 16; 7, 8, and 17; 9, 10, 15 and 18-20; 12; 22 and 23; 24; 25-27; 28-30; 32 and 33; and 34 and 35 on Garman '149

Claim 2

As concerns claim 2, reference Garman '149 is considered to show the use of an "auxiliary surface" (11, 11A) associated therewith in Figures 1, 2, 8, 9, 9A, and 10; column 4, lines 41-42; and in column 7, lines 18-19.

Claim 2 has been second amended to correct a typographical error and defines a further feature of claim 1, so that claim 2 distinguishes by virtue of its dependence on claim 1.

Claims 3, 4, 13 and 14

With regard to claims 3, 4, 13, and 14, the Examiner has asserted that the apparatus of Garman '149 inherently meets the claimed limitations since the device of Garman '149 raises the *entire* body of a user as disclosed in Figures 12 & 13 and in column 7, lines 38-40.

However, amended claim 3 is directed to the apparatus as defined in claim 2 wherein said body part is a foot positioned on said rest member in the non-expanded position of said expandable member. Hence, claim 3 is not directed to raising the entire body of a user.

Amended claim 4 is directed to an apparatus as defined in claim 2 wherein said body part is an arm positioned on said rest member. Once again, the entire body of user is not being elevated.

Amended claim 13 is directed to the method of claim 11 wherein the positioning step includes positioning a foot upon said rest member. Only a foot is being elevated and not the entire body of a user.

Claim 14 is directed to the method of claim 11 wherein the positioning step includes positioning an arm on said rest member. Here, only an arm is being elevated.

Claims 5, 6, and 16

Concerning claims 5, 6, and 16, the Examiner has applied Garman '149 as further disclosing the rest member as a "platform" (31) which is configured to the body part and the expandable member (39) is associated therewith (see Figures 2, 5, 7-9, 9A, and 10 and column 5, lines 42-47). The platform 31 is a seat of a wheelchair 30 which is shown in Figs. 2, 5, 7-9, 9A, and 10 as being completely flat. Consequently, it is not seen that a flat surface is configured to a body part.

In addition, claims 5, 6 and 16 define other features of the invention not disclosed or suggested by Garman '149.

Amended claim 5 is directed to the apparatus as defined in claim 1 wherein said rest member is a platform that is supported by a tubular member. There is nothing of this kind disclosed or suggested by Garman '149.

Amended claim 6 is directed to the apparatus as defined in claim 5 wherein said platform is configured to said body part when said rest member is in the non-expanded position of said expandable member. There is nothing of this kind disclosed or suggested by Garman '149.

Second amended claim 16 is directed to the method of fabricating apparatus for supporting a body part comprising the steps of: (a) providing a pivotally supportable platform configured to said body part; and (b) associating an expandable member with said platform. There is no pivotally supportable platform disclosed or suggested by Garman '149.

Claims 7, 8 and 17

With regard to claims 7, 8, and 17, the Examiner regards reference Garman '149 as also considered to show the expandable member (39) is a "bellows" adhered to the platform (31) in Figures 2, 5, 7-9, 9A, and 10 and in column 5, lines 42-47. The expandable member 39 is described by Garman as "lifting means" with a base located on a wheeled chassis 40.

Second amended claim 7 is directed to the apparatus as defined in claim 1 wherein said expandable member is selected from the class consisting of externally reinforced bellows and scissors mechanisms. There is no externally reinforced bellows in Garman '149.

Second amended claim 8 is directed to the apparatus as defined in claim 7 wherein said expandable member is adhered to a portion of said platform. The expandable member in Garman is located on the entire base of the wheeled chassis and not on just a portion.

Amended claim 17 is directed to the method of claim 16 further including the step attaching a bellows to said platform to serve as said expandable member and said platform is supportable by a tubular member pivotally attached thereto. There is no such tubular support member in Garman '149.

Claims 9, 10, 15, and 18-20

Concerning claims 9, 10, 15, and 18-20, the Examiner considers reference Garman '149 as showing means for expanding (41) which includes "means for inflating" the expandable member (39) and further including a "safety guard" (42) therefor, wherein the means for inflating comprises a "valve" (V₁, V₂, V₃, V_D) and a "compressor" (79) attached to the valve (see also Figures 1, 2, 5-9, 9A, 10-13, 16, 17, column 5, lines 49-50 & 52-54; and column 8, lines 30-40).

Applicant acknowledges that apparatus 41 is an air compressor unit (Figs. 2, 5, 6, 7, 8, 9, 10, 11, 12, and 13) and apparatus 39 is "lifting means" (Fig. 18). In addition, the valves V₁, V₂, V₃, V_D are shown in Fig. 16 and 17 with the compressor 79. However, apparatus 42 is a flank panel shown below an arm rest 43 in Figs. 1, 2, 5, and 6 that is detachably and pivotally connected to the seat 31. Accordingly, flank panel 42 does not act as a safety guard with respect to the lifting means 39.

By contrast with Garman '149, claim 9 is directed to the apparatus as defined in claim 1 wherein said means for expanding includes means for inflating said expandable member and further including a safety guard therefor. As noted above, there is no such safety guard in Garman '149.

Claim 10, directed to the apparatus as defined in claim 9 wherein said means for inflating comprises a compressor, distinguishes over Garman '149 by its dependence on claim 9.

Amended claim 15 is directed to the method of claim 11 further including the step of expanding against said rest member by a compressor. The compressor 79 in Garman expands against a seat and not against a rest member as required by the invention.

Amended claim 18, directed to the method of claim 17, further including the step of providing means for angularly inflating said bellows. There is no angular inflation of a bellows in Garman '149.

Claims 19 and 20, directed to the methods of claims 18 and 19, distinguish over Garman '149 by their dependence on respective claims 18 and 19.

Claim 12

Concerning claim 12, Garman' 149 is considered to show the step of expanding the rest member "in association with a bed" in column 4, lines 61-63, which state "(such as a bed, chair, stretcher, trolley or the like, providing a platform having a surface on which a person may be supported e.g., may lie, recline or sit), the winch may have". The quoted language refers to the operation of the winch 10 and is not related to the step of expanding a rest member in association with a bed.

Moreover, second amended claim 12, directed to the method of claim 11, further includes the step of expanding against said rigid rest member in association with a bed. There is no such expansion against a rigid rest member in Garman '149.

Claims 22 and 23

With regard to claims 22 and 23, Applicant acknowledges that Garman '149 discloses a surface comprising a "bed" (24) including a "mattress" (25) (Figures 1-3 and 8, 9, 9A, & 10; column 4, line 58; and column 5, line 36). Accordingly, these claims distinguish by their dependence on claim 21.

Claim 24

Concerning claim 24, reference Garman '149 is cited as disclosing "means for transferring" (11) positioned on a "platform" (31) (Figures 1, 8, 9, and 9A; column 4, lines 41-42; and column 5, lines 1-5). The means for transferring 11 is a slider that is not employed in the invention and the platform 31 is a seat.

Amended claim 24 is directed to a system as defined in claim 21 wherein the means for transferring is positioned on a floor-based platform. This is not in Garman '149.

Claims 25 -27

With regard to claims 25-27, reference Garman '149 is cited for disclosing the use of a "support" (60-Fig. 9) for the lower limb, "means for elevating" (41) the support with respect to the platform (31), wherein the means for elevating elevates the support and permits the transfer of the lower limb to the surface (24) (see Figures 9 & 9A and column 7, lines 5-14). To the contrary, the support 60 is a pneumatically-powered leg lifting device attached to the front of the seat in Fig. 9, inflated by a hose connection 97 from a deflated condition in which a cushion panel 61 of the support 60 hangs in front of the wheelchair to a condition in which the panel 61 projects level with the seat to lift and support. Accordingly, the leg-lifting device is not elevated in the sense of the invention, but becomes level as a result of inflation.

Claim 25 is directed to a system as defined in claim 24 further including a support for said lower limb and distinguishes by virtue of its dependence on claim 24.

Amended claim 26 is directed to a system as defined in claim 25 further including means for continuously elevating said support with respect to said platform. As noted above, the support 60 in Garman '149 is not continuously elevated but is inflated.

Claim 27, directed to a system as defined in claim 26 wherein said means for elevating elevates said support and permits the transfer of said lower limb to said surface, distinguishes by its dependence on claim 26.

Claims 28-30

Concerning claims 28-30, reference Garman '149 is cited as having the support (60) depressible to the vicinity of the platform (31) after the lower limb has been transferred, and wherein the elevating means (41) is "switch-actuatable" (1-8, 84) and is "selected from the class of manually and automatically powered devices" (see Figures 9, 16 and 17, column 7, lines 8-11; and column 8, lines 26-43 and 62-65).

Amended claim 28 is directed to a system as defined in claim 27 wherein said support is depressible in level condition to the vicinity of said platform after said lower limb has been transferred. The support 60 is not depressible in level condition in the reference.

Claim 29, directed to a system as defined in claim 28 wherein said elevating means is switch-actuatable, distinguishes by its dependence on claim 28.

Claim 30, directed to a system as defined in claim 29 wherein said elevating means is selected from the class of manually and automatically powered devices, distinguishes by its dependence on claim 29.

Claims 32 and 33

Concerning claims 32 and 33, reference Garman '149 is cited as showing "means for elevating" (31, 39, 41, 60) the lower limb adjoining the "elevated surface" (24) wherein the person is wheeled to the means for elevating the lower limb and the foot of the lower limb is positioned thereon in Figures 1, 2, 8, 9, 9a, 10 & 11 and in column 6, lines 26-29 & 54-55. The seat 31, the lifting means 39, and the flank panel 41 do not elevate a lower limb. While the support 60 can elevate a lower limb, the person is not wheeled to the means for elevating the lower limb because the support 60 is attached to the wheelchair.

Claim 32 is directed to a method as defined in claim 31 wherein said means for elevating said lower limb adjoins said elevated surface and distinguishes by virtue of its dependence on claim 31.

Claim 33 is directed to a method as defined in claim 31 wherein said person is wheeled to said means for elevating said lower limb and the foot of said lower limb is positioned thereon. As noted above, while the support 60 in Garman '149 can elevate a lower limb, the person is not wheeled to the means for elevating the lower limb because the support 60 is attached to the wheelchair.

Claims 34 and 35

With regard to claims 34 and 35, reference Garman '149 is cited for disclosing a lower limb elevated to substantially the level of the elevated surface and transferred to the elevated surface such that the person can adopt a reclined position in Figures 9 and 9A; column 6, lines 26-42 and in column 7, lines 5-14.

Claim 34, directed to a method as defined in claim 31 wherein said lower limb is elevated to substantially the level of said elevated surface, distinguishes by virtue of its dependence on claim 31.

Claim 35, directed to a method as defined in claim 34 wherein said lower limb is transferred to said elevated surface such that said person can adopt a reclined position, distinguishes by virtue of its dependence on claim 34.

The Examiner's Response to Claims as Previously Amended

In response to applicant's prior amendment and the arguments on pages 3 and 4 of the Response to the first Office Action, concerning Carpenter et al. '736 and Garman '086, the Examiner has agreed and the prior art rejections pertaining thereto have been withdrawn.

Since applicant's arguments on page 4 of his Response to the first Office Action concerning Garman '149, have not been fully persuasive, further amendments to the claims have been made to clarify the way in which the invention distinguishes over Garman '149.

While Garman '149 teaches a bellows expandable member 39, that member cannot function in the fashion disclosed by the invention and clarified by amendment to the claims. In addition, although the cushion panel 61 (Fig. 9) is inflatable, it does not expand in the fashion disclosed and claimed. As noted earlier, it initially hangs in the front of the wheelchair in a deflated condition and is then inflated to adopt an inflated condition that is level with the seat. Consequently, it does not qualify as an expandable

member which moves upwardly and forwardly to an inclined elevation. The cushion panel does not move forwardly because whether it is in its deflated or inflated condition, it is attached to the seat of the wheelchair so that it cannot move away from the seat, i.e., move forwardly and it does not adopt an inclined elevation, as exemplified by the forward tilt of applicant's expanded bellows. When the cushion panel is inflated, it adopts a level and not inclined position.

Conclusion

Since applicant's amendment necessitated the new ground(s) of rejection presented in the Final Office Action, further amendments have been made to clarify the way in which the invention distinguishes over the cited art. The Examiner is requested to contact applicant's attorney at the number given below if any further clarifications are needed to place the case in condition for allowance.

Respectfully submitted,

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MARKED-UP CLAIMS

1. (Second amended) Apparatus for supporting a body part, comprising:
a rest member for said body part;
an expandable member associated with said rest member; and
means for expanding said expandable member upwardly and forwardly at an angle with respect to a base of said expandable member, with said body part on said rest member.
2. (Second amended) Apparatus as defined in claim 1 further including an auxiliary surface associated therewith.
3. (Amended) Apparatus as defined in claim 2 wherein said body part is a foot positioned on said rest member in the non-expanded position of said expandable member.
4. (Amended) Apparatus as defined in claim 2 wherein said body part is an arm positioned on said rest member.
5. (Amended) Apparatus as defined in claim 1 wherein said rest member is a platform that is supported by a tubular member.
6. (Amended) Apparatus as defined in claim 5 wherein said platform is configured to said body part when said rest member is in the non-expanded position of said expandable member.
7. (Second amended) Apparatus as defined in claim 1 wherein said expandable member is selected from the class consisting of externally reinforced bellows and scissors mechanisms.
8. (Second amended) Apparatus as defined in claim 7 wherein said expandable member is adhered to a portion of said platform.
11. (Second amended) ~~The method~~ of supporting a body part for transfer, comprising the steps of:
 - (d) positioning said body part on a [rest] rigid member at rest;
 - (e) expanding said rest member to an inclined elevation with said body part supported thereon; and
 - (f) transferring said body part from said rest member.
12. (Second amended) The method of claim 11 further including the step of expanding against said rigid rest member in association with a bed.
13. (Amended) The method of claim 11 wherein the positioning step includes positioning a foot upon said rest member.

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15. (Amended) The method of claim 11 further including the step of expanding against said rest member by a compressor.

16. (Second amended) The method of fabricating apparatus for supporting a body part comprising the steps of:

- (a) providing a pivotally supportable platform configured to said body part;
and
- (b) associating an expandable member with said platform.

17. (Amended) The method of claim 16 further including the step attaching a bellows to said platform to serve as said expandable member and said platform is supportable by a tubular member pivotally attached thereto.

18. (Amended) The method of claim 17 further including the step of providing means for angularly inflating said bellows.

21. (Second amended) A system for assisting a person [having] to have a lower limb [into adopting] adopt a reclined position from a sitting position,

comprising a surface upon which a person is to be seated; and [to recline; and means for transferring the person to said surface, comprising] means for elevating [a] said lower limb of said person to a level permitting the transfer of said [person to said surface with said] lower limb [in] to a reclined position on said surface.

24. (Amended) A system as defined in claim 21 wherein the means for transferring is positioned on a floor-based platform.

26. (Amended) A system as defined in claim 25 further including means for continuously elevating said support with respect to said platform.

28. (Amended) A system as defined in claim 27 wherein said support is depressible in level condition to the vicinity of said platform after said lower limb has been transferred.

31. (Amended) A method for assisting persons seated [into adopting a reclined position] on an elevated surface comprising the steps of:

- (a) positioning a seated person's lower limb on means for elevating said lower limb;
- (b) elevating said lower limb with said person initially remaining seated; and
- (c) transferring said elevated lower limb to said elevated surface.

35. (Amended) A method as defined in claim 34 wherein said [disabled] lower limb is transferred to said elevated surface such that said person can adopt a reclined position.